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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,227	07/15/2003	David L. Zenker	KCC 4975 (K-C 19,019)	8513
321	7590	09/11/2006	EXAMINER	
SENNIGER POWERS ONE METROPOLITAN SQUARE 16TH FLOOR ST LOUIS, MO 63102			MATZEK, MATTHEW D	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 09/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/620,227	ZENKER ET AL.	
	Examiner	Art Unit	
	Matthew D. Matzek	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 June 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 3-6, 8, 10-13, 15, 16, 18-20, 22, 23 and 27-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 35 is/are allowed.
- 6) ☒ Claim(s) 3-6, 8, 10-13, 15, 16, 22, 23, 27-34, 36 and 37 is/are rejected.
- 7) ☒ Claim(s) 18-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/1/06</u> | 6) <input type="checkbox"/> Other: _____  |

***Response to Amendment***

1. The Amendment dated 6/22/2006 has been fully considered and entered into the Record.  
Claims 3-6, 8, 10-13, 15, 16, 18-20, 22, 23 and 27-37 are currently active.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 3-6, 8, 10-13, 15, 16 and 27-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouellette et al. (US 6,093,663) in view of May et al. (US 2002/0009940).
  - a. Ouellette et al. teach an elastic laminate comprising at least one fabric layer and an open cell mesh having first and second strands. The first fibers are deformed such that they are substantially flat in shape and the second fibers are elliptical in shape (Abstract). The Examiner equates the open cell mesh to the woven scrim of Applicant's invention. The applied invention is directed to an elastic absorbent article (col. 1, lines 15-20). The laminate is preferably elastic in at least a portion of the structural direction D, the direction of the second fibers **28**, mislabeled 29 in Figures 1 and 2, and inelastic in the direction of the first fibers (col. 2, lines 5-13 and col. 3, lines 45-50). The Examiner interprets the applied invention to have first fibers that are the MD fibers of Applicant and second fibers that are CD fibers of Applicant as length/machine direction is directed to the larger dimension and the width/cross direction is directed to the smaller dimension. Applicant is directed to Figures 1 and 2. The inelasticity in the MD and the elasticity in

the CD yields an article with a lower stiffness of the absorbent core in the cross direction. Ouellette et al. teach having CD strands with a spacing frequency different from the first strand spacing in the MD (col. 12, lines 1-28), but do not teach having CD zones along the MD with varied strand density.

b. May et al. teach a targeted elastic laminate material having different zones of tension providing the article with improved fit characteristics for disposable personal care products (Abstract). Referring to Figure 10 a pant-like absorbent garment 2 with high-tension (high stiffness) zones 7 and 9 with low-tension (low stiffness) zones 1 and 3 [0096]. In Figure 10 the machine direction is the vertical direction and the cross direction is the horizontal direction. Therefore, the high stiffness zones 7 and 9 run in CD across the MD of the article separated by the low stiffness zones of 1 and 3.

c. Since Ouellette et al. and May et al. are from the same field of endeavor (i.e. personal absorbent articles), the purpose disclosed by May et al. would have been recognized in the pertinent art of Ouellette et al.

d. It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the absorbent article of Ouellette et al. with the differing stiffness zones of May et al. to create an article with improved fit characteristics to disposable personal care products (Abstract; May et al.). As taught by Ouellette et al. this may be done by varying strand density, strand cross-sectional area, and the modulus of the strands (col. 12, lines 13-18). The article of the combined teachings of Ouellette et al. and May et al. possesses strand spacing that is different in the CD than the MD and has CD strand spacing that is varied in different zones of the MD.

e. Claims 3-6 are rejected as MD fibers have a strand frequency of between 2 and 10 per centimeter and the CD fibers have a strand frequency of between 2 and 5 (col. 12, lines 1-28; Ouellette et al.). This yields a CD to MD strand frequency ratio ranging from 1.0 CD to 1.0 MD to 0.2 CD to 1.0 MD. Claim 8 is rejected as the CD has a different strand spacing frequency than the MD.

f. Claim 15 is rejected as the CD fibers are substantially elliptical with major and minor axes being arranged substantially normal to a plane of the MD strands (Abstract; Ouellette et al.). The MD fibers are left with a flattened elliptical shape in the final product (Figures 1 and 2; Ouellette et al.). Claim 16 is rejected as the article of Ouellette et al. may have a CD strand density of 5 per centimeter with a cross-sectional area of  $0.003\text{cm}^2$  and a MD strand density of 2 strands per centimeter with a cross-sectional area of  $0.03\text{cm}^2$  (col. 12, lines 1-15). Therefore if the strands have the same facial shape this allows for CD strands with a lesser minor axis (diameter for circular strands) than the MD strands ( $0.0006\text{ cm}^2$  or a diameter of 0.028 cm per CD strand and  $0.0015\text{ cm}^2$  or diameter of 0.044 cm per MD strand). This provides for a CD/MD diameter ratio of 0.63. The CD/MD diameter ratio is a result effective variable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the article of Ouellette et al. with a strand diameter ratio of less than about 0.5, since it has been held discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980).

g. Claims 27-30 are rejected as the structural limitations set forth in claim 31 have been met and as such can serve as an absorbent article in the instantly claimed garments.

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3. Claims 22 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouellette et al. (US 6,093,663) as applied to claim 1 above, and further in view of Ducker et al. (US 5,622,581). The invention of Ouellette et al. is silent as to the weakening of the CD strands along their lengths to enhance buckling.

a. Ducker et al. disclose a disposable garment with de-elasticized elastic members via macerators, chemicals, selective laser beams, heat and freezing (Abstract). In the applied invention the elastic strands can be deactivated at points on the web (1) where it is desired to reduce or to eliminate the elastic tension in the finished product (col. 3, lines 28-34 and Figure 1). The means applied to the elastic members are meant to cut or weaken the elastic (col. 4, lines 4-13). Weakened elastic members remain continuous following treatment.

b. Since Ouellette et al. and Ducker et al. are from the same field of endeavor (i.e. absorbent articles), the purpose disclosed by Ducker et al. would have been recognized in the pertinent art of Ouellette et al.

c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have de-elasticized at least some of the CD strands of the invention of Ouellette et al. The skilled artisan would have been motivated by the desire to create an article with varying elasticity within the absorptive article in order to prevent undesired discomfort or looseness in the absorptive areas, while remaining elastic in other areas.

4. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ouellette et al. (US 6,093,663) as applied to claim 22 above, and further in view of Schafer et al. (US PG Pub

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2004/0092898). Ouellette et al. and Ducker et al. are silent as to the use of calcium carbonate as the chemical means by which the CD strands are de-elasticized.

- a. Schafer et al. disclose a breathable absorbent thong shaped sanitary napkin or panty liner (Abstract). The applied publication teaches the incorporation of particles of calcium carbonate into a polymeric backsheet for said absorbent napkin and due to the incompatibility of the calcium carbonate and polymer cracks are formed through the layer of polymer to form micropores, which allow water vapor to permeate through the film (para 67).
  - b. Since Ouellette et al. and Schafer et al. are from the same field of endeavor (i.e. absorbent articles), the purpose disclosed by Schafer et al. would have been recognized in the pertinent art of Ouellette et al.
  - c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have incorporated calcium carbonate into the strands of Ducker et al. that make up the reinforcing scrim. The skilled artisan would have been motivated by the desire to deactivate the elastic strands at points on the web via chemical means.
5. Claims 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouellette et al. (US 6,093,663) in view of Dean (US 4,107,371). Ouellette et al. is silent as to the weaving of the MD and CD strands in a manner that allows for the CD to woven under and over the MD strands.
- a. Dean teaches the use of an open weave that is relatively stiff in one direction and relatively flexible in other direction (Abstract). Adjacent parallel strands arranged with one strand over and the next strand under in alternating interlocking relationship at the

point of crossing each of respective monofilaments in the filling direction. The strands are then stabilized by fusion of the thermoplastic polymer at the point of the strands' intersection (Abstract). While Dean teaches flexibility in the warp direction (MD) and stiffness in the filling direction (CD) the emphasis of Dean's disclosure is provide relative flexibility in one direction and relative stiffness in the other. Therefore, an article may be constructed with flexibility in the filling direction (CD) and stiffness in the warp direction (MD).

b. Since it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24.

c. The combined articles of Ouellette et al. and Dean would result in an article that has possesses a scrim member with MD and CD strands crossing over one another with a stiffness in the CD that is less than the MD. The CD strands are corrugated and forms peaks and valleys along the CD with the MD stands being arranged to engage the CD stands across the peaks and valleys thereof. This fiber orientation provided by Dean allows for flexibility in the CD and stiffness in the MD.

#### ***Allowable Subject Matter***

6. Claim 35 is deemed allowable at this point in prosecution. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to teach the unique combination within an absorbent article that has a scrim member comprising MD and CD strands with the CD strands having lower stiffness than the MD strands, some of the CD strands being



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continuous and having weakened points along their lengths to enhance buckling at points between the MD stands that are offset from the adjacent CD strands.

7. Claims 18-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of Record fails to disclose or suggest an absorbent article with a network of MD strands and CD strands with CD strands that cause the article to have less stiffness in the CD than the MD and wherein at least some of the CD strands are continuous and have weakened points along their lengths to enhance buckling by means of said strands being notched, abraded or compressed.

#### ***Response to Arguments***

8. Applicant argues that the applied art fails to teach an absorbent article with an absorbent core constructed and arranged for receiving and holding fluids and including a reinforcing scrim member. As stated supra, Examiner equates the open cell mesh to the woven scrim of Applicant's invention. As both Ouellette et al. and May et al. are to be used in absorbent articles, which in turn would require an absorbent core of some sort to be absorbent the applied references currently meet the absorbent core limitation. Further structural limitations of said absorbent core could help to distinguish the instant invention from the applied references.

9. Applicant argues that the applied references fail to teach strands in the CD with reduced stiffness relative to the strands in the MD. The inelasticity in the MD and the elasticity in the CD yields an article with a lower stiffness of the absorbent core in the cross direction.

10. Applicant argues that Ouellette et al. teach away from the use of the laminate structure with an absorbent core of an absorbent article. Applicant is directed to col. 6, lines 43-46, which

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teaches that the fabric layer that is attached to the mesh layer may be made of cotton or wool fibers. Both of these fiber types are highly absorbent and may be considered an absorbent core.

11. Applicant argues that Ouellette et al. fail to teach an absorbent core with less stiffness in the CD than in the MD and that elasticity is not necessarily coexistent with stiffness. The applied article is directed to an elastic structure, which can be worn about the body without discomfort or irritation (Abstract), i.e. an article that can bend/conform to the body's shape and movement. The measurement of elasticity does entail a directional property that allows for movement in one direction. This movement or lack thereof can be equated to stiffness.

Therefore, if the CD is more elastic than the MD, the CD is less stiff than the MD.

12. Applicant argues that May et al. fail to teach an absorbent core constructed and arranged for receiving and holding fluids and including a reinforcing member intimately associated with the absorbent core. Applicant continues by arguing that May et al. fail to teach a lower stiffness in the CD than in the MD of an absorbent article. Examiner has relied upon May et al. for varied strand density in the CD and MD.

13. Applicant argues that Ouellette et al. and May et al., singularly or in combination, fail to teach or suggest an absorbent core including a reinforcing scrim member intimately associated with the absorbent core wherein the MD strands are spaced according to a first spacing frequency, and at least some of the CD strands have a second spacing frequency different from the first spacing frequency, the second reduced frequency spacing of the CD strands being varied in different zones of the elongate MD to provide a variance in stiffness between such zones. The structure of the absorbent article has been provided by Ouellette et al. May et al. teach differing stiffness zones of May et al. to create an article with improved fit characteristics to disposable

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personal care products (Abstract; May et al.). As taught by Ouellette et al. this may be done by varying strand density, strand cross-sectional area, and the modulus of the strands (col. 12, lines 13-18). The article of the combined teachings of Ouellette et al. and May et al. possesses strand spacing that is different in the CD than the MD and has CD strand spacing that is varied in different zones of the MD.

14. Applicant argues that neither Ouellette et al. nor May et al. teach an absorbent core having a reinforcing scrim member with thinner CD strands than those in the MD. Examiner agrees that May et al. fails to teach this limitation. Examiner does however interpret the applied invention to have first fibers that are the MD fibers of Applicant and second fibers that are CD fibers of Applicant as length/machine direction is directed to the larger dimension and the width/cross direction is directed to the smaller dimension. Applicant is directed to Figures 1 and 2.

15. Applicant argues that nothing in Ouellette et al. teaches CD strands smaller than MD strands and that this point was recognized by the Office in Action dated 8/29/2005. Applicant is referring to a rejection that has been withdrawn and is no longer applicable to the instant application's prosecution. Examiner's interpretation of the Ouellette et al. reference has been set forth supra.

16. Applicant argues that neither Ouellette et al. nor Ducker et al. teach an absorbent core with less stiffness in the CD than in the MD. This argument has been addressed supra. Applicant continues by arguing that the applied references fail to teach a network of MD and CD strands being formed with at least some of the CD strands being continuous and having weakened points along their lengths to enhance buckling. In the Ducker et al. invention the

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elastic strands can be deactivated at points on the web (1) where it is desired to reduce or to eliminate the elastic tension in the finished product (col. 3, lines 28-34 and Figure 1). The means applied to the elastic members are meant to cut or weaken the elastic (col. 4, lines 4-13).

Weakened elastic members remain continuous following treatment.

17. Applicant argues that the elastic strands of Ducker et al. are not intimately associated with the absorbent pads to maintain their structural integrity in use. Examiner has relied upon Ducker et al. for the teaching of weakening elastic strands within an absorbent article. The absorbent article and the claimed structure has been provided by Ouellette et al.

18. Applicant argues that Ducker et al. fail to teach that the elastic strands affect the stiffness of the absorbent pad in any way. The correlation between elasticity and stiffness has been addressed supra. Applicant continues by stating that Ducker et al. fail to disclose or suggest a network of MD strands and CD strands wherein at least some of the CD strands are continuous and have weakened points along their lengths to enhance buckling. The Ducker et al. reference has only been relied upon to teach the weakening of elastic strands in an absorbent article.

19. Applicant argues that Dean fails to teach or suggest an absorbent core constructed and arranged for receiving and holding such fluids and including reinforcing scrim member intimately associated with the absorbent core to maintain its structural integrity in use, and CD strands selected and formed to provide a stiffness of the absorbent core in the cross direction that is less than the stiffness of the absorbent core in the MD. The Ouellette et al. reference has been relied upon for these teachings. Applicant continues by arguing that there is no motivation to combine the inventions of Dean and Ouellette et al. Since it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably

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pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24.

20. Applicant argues that the combination of the Ouellette et al. and Dean references would result in a mesh that would not lay flat and not be able to fully penetrate the adjacent fabric layer and would undesirably contact the user during use. As shown in Figure 1 of Ouellette et al. the fibers do not lie flat before the application of heat. However following the application of heat and pressure the strands become flattened as shown in Figure 2. This flattening would allow for the strands to contact the fabric layer and would not contact the wearer.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Matzek whose telephone number is (571) 272-2423. The examiner can normally be reached on 8:30 am - 5:00 pm.

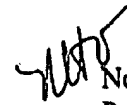
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mdm

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Norca L. Torres-Velazquez  
Primary Examiner  
Art Unit 1771

September 5, 2006